

Student: yaser almohaws
Submitted: 09/16/14 2:16pm

Instructor: fahad aljabr
Course: MATH-001: Fundamentals of Math 11415
Book: Bittinger: Introductory and Intermediate Algebra, 4e

Assignment: Graded Homework 2

1. Solve using the multiplication principle.

$$-3x \leq 15$$

The solution set is $\{x \mid x \geq -5\}$.

(Type an inequality symbol. Then type an integer or a simplified fraction.)

2. About 55.2 billion pieces of unopened junk mail ends up in landfills each year. This is about 48% of all the junk mail that is sent annually. How many pieces of junk mail are sent annually?

Approximately 115 billion pieces of junk mail are sent annually.
(Simplify your answer. Type an integer or a decimal.)

3. The width of a rectangle is fixed at 14 ft. What lengths will make the perimeter
(a) at least 150 ft?
(b) at most 150 ft?

(a) Any length greater than or equal to 61 ft.
(Type an integer or a fraction. Simplify your answer.)

(b) Any length less than or equal to 61 ft.
(Type an integer or a fraction. Simplify your answer.)

4. Solve using the principles together. Don't forget to check.

$$90 = 15(2y + 2)$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- A. The solution is $y = 2$. (Simplify your answer.)
 B. The solution is all real numbers.
 C. There is no solution.

5. Solve the formula for the indicated variable.

$$B = yn + y, \text{ for } n$$

The solution is $n = \frac{B - y}{y}$.

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6. Solve.

$$8y - 9 < 7y - 4$$

The solution is $\{y \mid y < 5\}$.
(Simplify your answer.)

7. In 2005, about 6 billion gal of renewable fuels, such as ethanol and other biofuels, were used in the United States. The energy law passed in 2007 requires that 42 billion gal of such fuels be used by 2022. What is the percent of increase?

The percent of increase is 600%. (Simplify your answer.)

8. A 44-inch board is cut into two pieces. One piece is three times the length of the other. Find the lengths of the two pieces.

The short piece is 11 inches long.

The long piece is 33 inches long.

9. Solve.

$$9x + 4 = 6x + 5$$

The solution is $x = \frac{1}{3}$.

(Type an integer or a simplified fraction.)

10. Solve using the addition and multiplication principles.

$$7 - 6x > 3 - 5x$$

Select the correct choice below and fill in the answer box within your choice.

- A. The solution set is $\{x \mid x \leq \square\}$.
(Simplify your answer.)
- B. The solution set is $\{x \mid x < 4\}$.
(Simplify your answer.)
- C. The solution set is $\{x \mid x > \square\}$.
(Simplify your answer.)
- D. The solution set is $\{x \mid x \geq \square\}$.
(Simplify your answer.)

11. Solve using the addition principle. Don't forget to perform a check.

$$x - 9 = 25$$

The solution is $x = 34$.

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12. Solve the following equation.

$$3 - 4(x + 1) - 3 = 3 + 2(4 - 2x) - 16$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- A. The solution is $x = \square$. (Simplify your answer.)
- B. Every real number is a solution.
- C. There is no solution.

13. Solve using the addition principle. Don't forget to check.

$$x + 9 = 41$$

The solution is $x = 32$.

14. Solve.

63 is what percent of 180?

63 is 35% of 180. (Simplify your answer.)

15. Solve.

$$8x - (3x + 6) = 19$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- A. The solution is $x = 5$. (Simplify your answer.)
- B. The solution is all real numbers.
- C. There is no solution.

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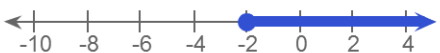
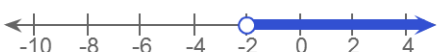
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Assignment: Graded Homework 2

16. Graph on a number line.

$$x \geq -2$$

Choose the graph of $x \geq -2$.

- A.  A number line from -10 to 4 with tick marks every 2 units. A solid blue dot is at -2, and a blue ray extends to the left from -2.
- B.  A number line from -10 to 4 with tick marks every 2 units. An open blue circle is at -2, and a blue ray extends to the left from -2.
- C.  A number line from -10 to 4 with tick marks every 2 units. A solid blue dot is at -2, and a blue ray extends to the right from -2.
- D.  A number line from -10 to 4 with tick marks every 2 units. An open blue circle is at -2, and a blue ray extends to the right from -2.

17. Sarah's investment in stock grew 14% to \$456. How much did she invest?

She invested \$ 400 .

18. Solve.

$$6x + 12 - 9x = 16 - 19x + 16x - 4$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- A. The solution is $x = \square$.
(Simplify your answer.)
- B. The solution is all real numbers.
- C. There is no solution.

19. Solve using the multiplication principle.
Don't forget to perform a check.

$$11x = -77$$

The solution is $x = -7$.

20. Solve.

$$-\frac{7}{5}a = 28$$

The solution is $a = -20$.
(Type an integer or a simplified fraction.)

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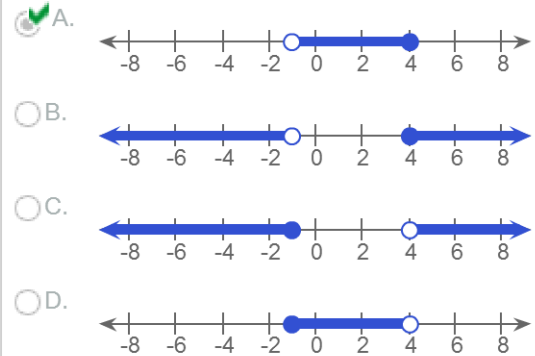
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21. Graph on a number line, where x is a real number.

$$-1 < x \leq 4$$

Choose the graph of $-1 < x \leq 4$.



22. Solve.

$$2.1x - 2.68 = 0.84 - 6.7x$$

The solution is $x = 0.4$.

(Type an integer or a decimal.)

23. Solve using the addition and multiplication principles.

$$43 > 7 - 9x$$

Select the correct choice below and fill in the answer box within your choice.

(Simplify your answer.)

- A. The solution set is $\{x \mid x \geq \square\}$.
- B. The solution set is $\{x \mid x > -4\}$.
- C. The solution set is $\{x \mid x < \square\}$.
- D. The solution set is $\{x \mid x \leq \square\}$.

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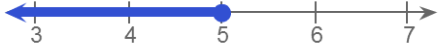


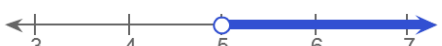
24. Solve. Then graph.

$$9x \geq 45$$

Choose the correct solution.

- A. $\{x \mid x < 5\}$ B. $\{x \mid x \leq 5\}$
 C. $\{x \mid x \geq 5\}$ D. $\{x \mid x > 5\}$

Choose the correct graph of the solution.

- A. 
- B. 
- C. 
- D. 

25. Solve the following equation by using the addition principle. Check the solution.

$$-\frac{1}{2} + y = -\frac{2}{3}$$

The solution is $-\frac{1}{6}$. (Type an integer or a simplified fraction.)

26. Translate to an equation and solve.

40 is 50% of what?

40 is 50% of 80.

(Simplify your answer. Type an integer or a decimal.)

27. The median size of a new singlefamily home grew from 1799 ft² in 1998 to 2278 ft² in 2007. What is the percent of increase?

The percent of increase is about 26.6%.

(Simplify your answer. Type an integer or a decimal rounded to the nearest tenth.)

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28. Solve. Then graph.

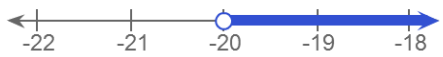

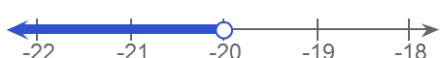

$$a + 8 \leq -12$$

Select the correct choice below and fill in the answer box within your choice.

(Simplify your answer.)

- A. The solution set is $\{a \mid a \leq -20\}$.
- B. The solution set is $\{a \mid a > \square\}$.
- C. The solution set is $\{a \mid a < \square\}$.
- D. The solution set is $\{a \mid a \geq \square\}$.

Which of the following is the graph of the solution?

- A. 
- B. 
- C. 
- D. 

29. Solve using the multiplication principle.

$$-6x > \frac{1}{13}$$

The solution set is $\{x \mid x < -\frac{1}{78}\}$.

(Type an inequality symbol and a fraction.)

30. The ages of Edna, Ellie, and Elsa are consecutive integers. The sum of their ages is 114.

What are their ages?

Their ages are 37 years, 38 years and 39 years old.

(Type the ages in order from youngest to oldest.)

31. What is 25% of 780?

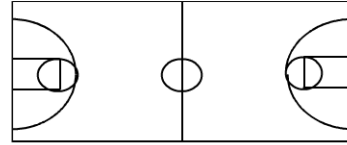
The answer is 195.

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32. The perimeter of a basketball court is 102 meters and the length is 6 meters longer than twice the width. What are the length and width?



What is the width?

15 m

What is the length?

36 m

33. Solve. Clear fractions or decimals first.

$$\frac{3}{5} + \frac{1}{3}t = \frac{2}{5}$$

The solution is $t = -\frac{3}{5}$.

(Type an integer or a simplified fraction.)

34. Solve using the multiplication principle.

$$-5x < -15$$

The solution set is $\{x \mid x > 3\}$.

(Type an inequality symbol. Then type an integer or a simplified fraction.)